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June 3, 1952

MINUTES OF THE TWENTY-NINTH MEETING OF THE THEORETICAL MEGATON GROUP

28 May 1952

1. The twenty-ninth meeting of the TMG convened at 9:00 AM, Wednesday, 28 May 1952, in the W-Division Conference Room. Those present were:

G. Bell	R. M. Landshoff
H. A. Bethe	C. L. Longmire
A. A. Broyles	J. C. Mark, Chairman
J. W. Calkin	H. L. Mayer
C. Evans	N. Metropolis
F. Evans	L. W. Nordheim
B. E. Freeman	J. C. Potts
R. W. Goranson	F. Reines
G. M. Grover	M. Rosenbluth
M. G. Holloway	S. M. Ulam
F. C. Hoyt	G. M. Wing

E. J. Zadina

Topics

2. Status of Machine Calculations.

3. [redacted]

4. [redacted] DOE b(3)

5. Experiment to determine Mixing.

6. [redacted] DOE b(3)

2. Status of Machine Calculations.

The Matterhorn ignition burning calculation coded for UNIVAC is not yet completed.

The Alarm Clock calculation is being coded by Richtmyer and Nordheim for UNIVAC and will be run this summer.

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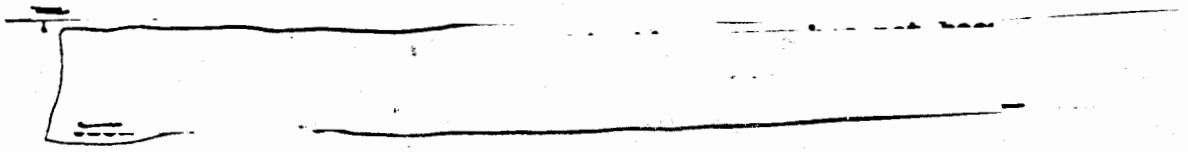
WD - family

Results from the A.C. explosion calculation for an initial assumed implosion are being analyzed.

DOE b(3)

Freeman and Broyles have completed three additional radiation flow calculations. For these calculations the following conditions were assumed:

DOE
b(3)



DOE
b(3)

It was decided to make one or two additional radiation flow runs as a basis for further implosion calculations. If a method for correcting the flux formula can be found then one calculation should be used for

comparison with previous results.

[redacted] DOE b(3)

5. Experiment to determine Mixing.

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ons

DOE b(3)

The following set of conditions for a possible experiment were arrived at after the meeting, in a discussion with Bethe.

[redacted]

DOE b(3)

It was agreed that a considerably smaller amount of 14 mev neutrons would be observable. [redacted]

DOE b(3)

It seems questionable, however, whether such an experiment could be carried out in Nevada since it would seem to be difficult to design such a device which has the required high efficiency combined with a low total yield.

6. [redacted]

DOE b(3)